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A NEW *GERRHONOTUS* LIZARD FROM UTAH.

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A specimen of *Gerrhonotus* taken in Kane County, extreme southern Utah, in August, 1933, not previously reported for lack of supporting specimens, is being described at this time in order to make the information available to other workers in the field. This appears to be the first specimen of the genus reported from Utah, and seems to be widely separated from other known races of the genus. I am indebted to Henry S. Fitch, Hobart M. Smith and Joe Tihen for advice and to T. L. Rodgers of the Museum of Vertebrate Zoology of Berkeley, California for the loan of comparative material.

The terminology used herein differs somewhat from that of Fitch (Amer. Mid. Nat., 1938:381-424) in his systematic account of the Alligator Lizards (*Gerrhonotus*). After consultation with Smith and Tihen and reference to other literature, I have adopted the following terms which are correlated with the Fitch terminology in the following table, most of which was worked out by Dr. Smith for use in his handbook:

<i>Woodbury</i>	<i>Fitch</i>
Supranasals.....	Anterior pair of internasals
Internasals.....	Posterior internasals
Frontonasal.....	Azygous prefrontal
Prefrontals.....	Prefrontals
Frontal.....	Frontoparietal
Frontoparietals.....	Anterior parietals
Interparietal.....	Interparietal
Parietals.....	Posterior parietals
Interoccipital.....	Interoccipital
Upper {	Anterior postnasals
Lower { postnasals.....	
Canthal {	Posterior postnasals
Loreal {	
Cantholoreal.....	Loreal
Supraoculars.....	Supraoculars
Medial row.....	Inner row
Lateral row.....	Outer row
Infralabials } Sublabials } Chinshields } Postmentals }	3 rows of infralabials



*Gerrhonotus coeruleus utahensis* new subspecies.

## UTAH ALLIGATOR LIZARD.

*Type*.—Adult female, University of Utah, Museum of Zoology, No. 1676, taken in Sink Valley, south of Alton, about twenty miles north of Kanab, Kane County, Utah, about 6500 feet altitude, August, 1933 by Von Parkinson.

*General Description*.—Specimen in alcohol. Length of head, 20 mm.; neck, 15 mm.; snout to anus, 105 mm.; tail incomplete. Neck slightly constricted. Legs small and weak. Ear nearly concealed, opening posteriorly through a narrow slit into lateral fold, which begins just ventral to the angle of the mouth and extends backward to the hind leg, the base of which is enveloped at its end. The front leg base is also enveloped by the fold, which expands sufficiently at and behind the leg base to allow the upper arm to be almost enclosed when compressed closely against the side. This suggests the idea that it is an adaptation for burrowing and the idea is supported by the scalation of the head, especially that around the ears which are so nearly covered.

*Scalation*. There are 16 dorsal longitudinal scale rows on mid-body and 10 on the neck, all well keeled and 45 transverse rows on neck and body to a point dorsal to the posterior edge of the hind leg. Ventrally there are 57 scales from mental to preanals inclusive, arranged in transverse rows except in the gular region. On the abdomen, they are arranged in 12 longitudinal rows.

Head as shown in the drawings. Nasals are narrowly in contact with rostral. Two supranasals present, which adjoin behind the rostral to make the first postrostral pair. Behind these are a pair of internasals followed by a single large frontonasal, which is slightly azygous. Behind this single plate, lies a pair of prefrontals which are barely in contact at their corners, being almost separated by the anterior point of the frontal. This latter plate is slightly wider behind and is bordered posteriorly by a pair of frontoparietals which are in contact at their medial corners so that they completely separate the frontal from the interparietal. This latter plate bears a conspicuous pineal spot, is bordered laterally by the parietals and is adjoined behind by the interoccipital. The frontal is bordered laterally by the median row of supraoculars. The lateral row of supraoculars is enclosed between the medial row and the superciliaries.

A complete series of superciliaries (narrow) separates the eye from the supraoculars. A narrow series of 3 postoculars, 2 suboculars and a preocular completes the encirclement of the eye, except posteriorly where there is a narrow gap between the superciliaries and postoculars. The posterior subocular is wedge-shaped, wider behind. The preocular is large squarish and contains a conspicuous glandular space which narrows and extends backward between the suboculars and the eye. Supralabials 11-10; infralabials 10-10. Posterior two supralabials highly angular above. Underneath the head, a row of sublabials lies between the infralabials and the large chinshields. Behind the mental, the

postmentals are in contact as are the first pair of chinshields, but the succeeding two pairs are separated by smaller scales in the middle.

*Coloration.* Dark brown (15E6)<sup>1</sup> dorsally on head and most of neck, except tip of nose is lighter brown (15 F 5). Posteriorly, the body is a similar light brown but there are indications of about 13 incomplete brown (15 C 10) crossbands on the body, each about one scale wide extending nearly to the lateral folds and the series continues on to the tail. The first band lies directly over the bases of the front legs and the 13th over the hind legs. The ventral ground color is a very light brown (12F4), extending posteriorly from the chin. The dark brown pigment from the dorsal neck extends around the sides to suffuse with dark pigment the sides of the throat, which in turn are connected underneath by two faint bands. A similar faint pattern of dark pigment with indistinct outlines extends along the abdomen where it is plainer in the middle and faint or absent along the sides and absent on the preanal scales.

*Diagnosis.* Much lighter in color than other subspecies and has a much reduced color pattern. Little difference in general color of head and body, being much less than the difference exhibited in *G. c. shastensis*. The dark color of the abdomen lies mainly between scale rows but shows some dark pigment along the edges of both longitudinal and transverse rows as well as some diffusion of pigment in center of many scales. The white tips of dark scales on the sides are inconspicuous or missing as they are in some specimens of *G. c. principis*. No recognizable vertebral stripe is present.

All 16 dorsal scale rows well keeled; some scales on forearm and tibia well keeled; temporal scales not keeled; upper scales on side of tail behind leg keeled, weaker or absent on lower scales. The two frontoparietals are in contact thus definitely separating frontal and interparietal which are in contact in all the other specimens of other subspecies examined. Superciliary series complete. Supranasal plates form a pair behind rostral. Nasal narrowly in contact with rostral.

*Discussion.*—There is little doubt that this is a race of the species *Gerrhonotus coeruleus*, even though intermediate and intergrading material is not yet available. The 16 rows of dorsal keeled scales, the complete series of superciliaries, the azygous frontonasal plate and surrounding scales, the pair of supranasals behind the rostral, the frontal-parietal-occipital relations, the highly angular posterior supralabials, the sublabial-chinshield relationships and the general aspects of the color pattern all bespeak conspecific identity.

The geographic position and the detailed differences in color pattern, keeling and body proportions indicate sufficient distinction to warrant subspecific separation.

*Comparisons.* Nearer *G. C. shastensis* and *palmeri* than *G. c. coeruleus* and *principis*. Differs from *shastensis* in great reduction of color pattern and in number of white-tipped scales; less contrast between general

<sup>1</sup> All color determination from Maerz and Paul, Dictionary of Color.

color of head and body; difference in distribution of dark color of abdomen; in contact of the two frontoparietals instead of contact of frontal and interparietal.

Differs from *palmeri* in much lighter dorsal color which is slightly lighter than the head; noticeably smaller limbs and head; less distinct keeling on the sides of the tail; contact of the two frontoparietals instead of contact of frontal and interparietal; difference in distribution of dark color of abdomen and almost total lack of white-tipped scales on sides.



FIG. 1. Type specimen of *Gerrhonotus coeruleus utahensis*, Utah Alligator Lizard. Photo by W. P. Cottam.

